



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/555,809	07/28/2000	Marcello Donati	753-168P	9050

2292 7590 02/01/2005

BIRCH STEWART KOLASCH & BIRCH
PO BOX 747
FALLS CHURCH, VA 22040-0747

EXAMINER

BAYARD, EMMANUEL

ART UNIT	PAPER NUMBER
----------	--------------

2631

DATE MAILED: 02/01/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/555,809

Applicant(s)

DONATI ET AL.

Examiner

Emmanuel Bayard

Art Unit

2631

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 08 October 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-30 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1-21 is/are allowed.
- 6) ☒ Claim(s) 22-30 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

This is in response to amendment filed on 10/8/04 in which claims 1-30 are pending. The applicant's arguments have been fully considered but they are not persuasive enough to overcome the prior art of Fischer. Therefore this case is made final. (see Examiner's response to argument below).

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

Claims 22-30 are rejected under 35 U.S.C. 102(e) as being anticipated by Fischer et al U.S. patent No 5,852,651.

As per claims 22 and 27, Fischer discloses method for generating a test signal to be applied to a radio frequency receiver having N intelligent antennas,

Art Unit: 2631

comprising the steps of: obtaining N digital signals (see figs. 4, 8, 11a , 11b , 19, 27b element 174 and col.2, lines 48-67), each digital signal replicating a digital multi carrier signal having phase-modulated carriers; reconstructing N broadband signals by performing digital-to analog conversion (see figs.4, 21b, 29, 32a , 32b, 44 elements 144, 144a, 504, 932 and col.8, line 49) and broadband filtering on the N digital signals (see fig 44 elements 936 and col.13, lines 36-65); obtaining N broadband radio frequency signals by performing radio frequency conversion on the reconstructed N broadband signals (see fig.29 element 506); amplifying the N broadband radio frequency signals (see figs.29, 44 elements 510 938 and col.7, lines 63-65); and applying the amplified N broadband to input of the receiver, the N inputs bypassing the N intelligent antennas of the receiver wherein each of the N broadband radio frequency signals simulates a radio frequency signal received by a corresponding one of the N intelligent antennas (see element 26' col.13, lines 36-45).

As per claim 23, Fischer inherently includes, wherein the obtaining step obtains the N digital signals based on parameters defining a scenario concerning at least one useful transmission signal and one or more isofrequential interference signals, the isofrequential interference signals having simulated arrival directions generally different from those of said relevant useful signals so that different variations of the receive and transmit channel would be provided by using different combination of power combiners and power splitters.

As per claim 24, Fischer inherently includes, wherein the steps are repeated at time intervals of a same duration, using new parameters to obtain the

Art Unit: 2631

N digital signals, thus giving dynamic and recurrent characteristics to said simulated scenario.

As per claim 25, Fischer inherently includes, wherein the same duration is substantially equal to, or lower than, 4.61 ms as to accurately reduce noise and error at the output of the signal.

As per claim 26, Fischer inherently includes, wherein the parameters take into account the presence of noise, a Doppler effect due to the speed of transmitting mobiles, and quick and sudden fading of a received electromagnetic field, caused by multiple paths destructive interference or by masking by obstacles encountered by mobiles in movement as to acquire the original signal at the output of the system.

As per claim 28, Fischer inherently includes, means for obtaining said N digital signals from control messages at sequential intervals of identical duration, said control messages being used to generate a phase-modulated radio frequency test signal as to accurately identify the original digital signal.

As per claim 29, Fischer inherently includes, means for storing tables of parameters defining a simulated scenario; and means for converting said tables of parameters to obtain said control messages as to generate a digital replicate signal similar to the original signal.

As per claim 30, Fischer inherently includes, wherein the stored tables include, parameters simulating at least one of: presence of noise, a Doppler effect due to speed of mobiles, and fading of a received electromagnetic field as to acquire the original signal at the output of the system.

Response to Arguments

1. Applicant's arguments filed 10/8/04 have been fully considered but they are not persuasive. In page 5, paragraph 1, of the response applicant argues that Fischer does not teach "simulate signal that are received from antennas in the micro-cell unit". Examiner respectfully disagrees. In fact Fischer clearly teaches "the simulated signal transmitter output signal can be directly represented in digital form that can be processed to emulate the output of the receiver (see col.14, lines 21-25) in the micro-cell unit. Base on such evidence the prior Fischer does teach simulate signal that are received from antennas . Therefore applicant's arguments are moot and this case is made final.

Allowable subject matter

Claims 1-21 are allowed over the prior art of record.

The following is a statement of reasons for the indication of allowable subject matter: the present invention teaches a simulation process for obtaining a phase modulated radio frequency test signal. The closest prior arts of Taylor et al U.S. Patent No 5,764,693, Minarik U.S. Patent NO 6,018,644, Dent U.S. Patent No 6,185,259 , Moriyama U.S. Patent No 6,483,880 B1 and Lu U.S. Patent No 6,025,758 teach a similar simulation process. However the closest prior arts mentioned above fail to anticipate or render obvious all the recited features claims 1 and 12.

Art Unit: 2631

Conclusion

2. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Emmanuel Bayard whose telephone number is 571 272 3016. The examiner can normally be reached on Monday-Friday (7:Am-4:30PM) Alternate Friday off.

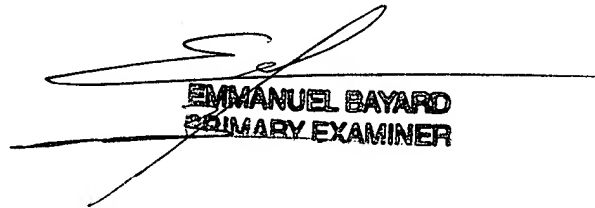
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mohammed Ghayour can be reached on 571 272 3021. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Art Unit: 2631

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Emmanuel Bayard
Primary Examiner
Art Unit 2631

January 31, 2005



EMMANUEL BAYARD
PRIMARY EXAMINER